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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/575,996   | 11/09/2006  | Ferdinand Wiener     | 06-284              | 9377             |
| 20306 7590 10/14/2010<br>MCDONNELL BOEHNNEN HULBERT & BERGHOFF LLP<br>300 S. WACKER DRIVE<br>32ND FLOOR<br>CHICAGO, IL 60606 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| LU, JIPING   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 3743   |             |                      |                     |                  |
| MAIL DATE  |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/575,996

**Applicant(s)**

WIENER ET AL.

**Examiner**

Jiping Lu

**Art Unit**

3743

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-30 and 32-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-28, 32-34 and 36-41 is/are rejected.
- 7) ☒ Claim(s) 29, 30 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Paper No(s)/Mail Date \_\_\_\_\_
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/9/2010 has been entered.

***Claim Status***

2. Claims 1-8 and 31 are cancelled. Claims 9-30 and 32-41 are now in the case.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 9-11, 13-22, 24, 27-28, 32-34 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Champlin (U. S. Pat. 3,048,383) in view of Tanabe et al. (U. S. Pat. 5,044,938).

Champlin discloses a method and an apparatus for drying treated articles 11, the treated articles 11 being transported along a predefined transport path, with a first gas stream being blown from above onto the treated articles 11, and a second stream of a gaseous drying medium being blown from below onto the treated articles 11. The first and second gas streams are

generated by corresponding fan means 39, 40 and/or damper/flap 59 and regulated in feed lines 53 to respective gas outlet devices 36. The treated articles 11 are continuously conveyed in along the transport path for drying and conveyed out after drying by transport means 12, 13. The gas outlet devices 36 are in the form of a nozzle that includes a nozzle plate 33, 34 having apertures 35 facing towards the transport path. However, Champlin does not show a temperature of the first and/or second gas stream is detected, and the same fan means for generating the first and/or second gas stream are controlled in such a way that the temperature detected is regulated to a predefined value. Tanabe et al. teach a concept of regulating the gas stream temperature by controlling the fan 7 rotation speed in response to the gas stream temperature detected by the temperature sensor 12 (see col. 4, lines 31-40). The gas stream pressure is also regulated by valve/flap 9 based on detected gas pressure from a pressure sensor 11. Control means 13-21 is configured to control one and the same fan means 7 which generate the respective gas flow such that the temperatures of the respective gas flows are regulated to predefined values (col. 4, lines 31-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of Champlin to regulate the gas flow temperature by controlling the one and the same fan rotation speed based on the detected gas stream temperature and to regulate the pressure based on the detected gas pressure as taught by Tanabe et al. in order to more efficiently control the gas stream temperature and pressure and obtain a predictable gas temperature and pressure control result. For claims 39 and 41, see openings 27, 28 of Champlin. As to the claimed pressure sensor means arranged between the respective regulating means and the gas outlet device recited in claims 17, 37, Tanabe et al. teaches an apparatus for drying article 3 comprising pressure sensor means 11 arranged between

the respective regulating means 7, 9 and the gas outlet devices 2 for detecting a pressure generated by the respective gas flow. The control means 13-21 controls the regulating means 7, 9 in dependence on the pressure detected by the respective pressure sensor means 11. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Champlin to include pressure sensor means arranged between the regulating means and the gas outlet device as taught by Tanabe et al. in order to more efficiently control the gas pressure.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Champlin (U. S. Pat. 3,048,383) in view of Tanabe et al. (U. S. Pat. 5,044,938) as applied to claim 11 above, and further in view of Leap (US 2003/0136019 A1).

The apparatus of Champlin as modified by Tanabe et al. as above includes all that is recited in claim 12 except for the nozzle apertures include elongated slits. Leap teaches a drying apparatus with nozzle apertures including elongated slits 30 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Champlin to include a nozzle with elongated slits as taught by Leap in order to obtain a predictable drying result.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Champlin (U. S. Pat. 3,048,383) in view of Tanabe et al. (U. S. Pat. 5,044,938) as applied to claim 22 above, and further in view of Hochstrasser et al. (U. S. Pat. 4,113,977).

The apparatus of Champlin as modified by Tanabe et al. as above includes all that is recited in claim 23 except for an extraction means, a pressure sensor means and a control means for controlling extraction means based on the pressure detected by the pressure sensor.

Hochstrasser et al. teach an apparatus for drying article 54 comprising an evacuation duct 38, an extraction means 82, a pressure sensor 90 and a control means 94 same as claimed. The control means 94 controls the extraction means 84 in such a way that a pressure detected by the pressure sensor means 90 is maintained at a constant predefined value (see Fig. 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Champlin to include an extraction duct, an extraction means, a pressure sensor and a control means for controlling the extraction means based on the pressure detected by the pressure sensor as taught by Hochstrasser et al. in order to more efficiently control the drying.

7. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Champlin (U. S. Pat. 3,048,383) in view of Tanabe et al. (U. S. Pat. 5,044,938) as applied to claim 24 above, and further in view of Melgaard (U. S. Pat. 5,263,265).

The apparatus of Champlin as modified by Tanabe et al. as above includes all that is recited in claims 25-26 except for an intake duct for fresh gaseous drying medium and control means for controlling the heating means based on the detected gas temperature in the gas feed line. Melgaard teaches an apparatus for drying article 26 comprising an intake duct (at 30.2) for fresh gaseous drying medium and a temperature sensor 32 and at least one gas heating means 22, 24. Control means 34.1 controls the gas heating means in such a way that the temperature detected by the temperature sensor 32 is regulated to a predefined value. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Champlin to include fresh gas intake duct and temperature

control means for controlling the heating means based on gas temperature detected by the temperature sensor as taught by Melgaard in order to more efficiently control the drying.

8. Claims 9-11, 13-22, 24, 27-28, 32-34 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Tanabe et al. (U. S. Pat. 5,044,938) in view of Champlin (U. S. Pat. 3,048,383).

Tanabe et al. discloses a method and an apparatus for drying treated articles 3, the treated articles 3 being transported along a predefined transport path, with a first gas stream being blown from above onto the treated articles 3, and a second stream of a gaseous drying medium being blown from below onto the treated articles 3 (see Fig. 1). The first and second gas streams are generated by corresponding fan means 7 and/or damper/flap 9 and regulated in feed lines (not numbered, see Fig. 1) to respective gas outlet devices 2. The treated articles 3 are continuously conveyed in along the transport path for drying and conveyed out after drying. The gas outlet devices 2 are in the form of a nozzle that includes a nozzle plate having apertures (see Fig. 1) facing towards the transport path. Pressure sensor means 11 is arranged between the respective regulating means 83 and the gas outlet devices 11 for detecting a pressure generated by the respective gas flow. The gas stream temperature is regulated by controlling the fan 7 rotation speed in response to the gas stream temperature detected by the temperature sensor 12 (see col. 4, lines 31-40). The gas stream pressure is also regulated by valve/flap 9 based on detected gas pressure from a pressure sensor 11. Control means 13-21 is configured to control one and the same fan means 7 which generate the respective gas flow such that the temperatures of the respective gas flows are regulated to predefined values (col. 4, lines 31-40). Evacuation duct 10b is provided to evacuate the gaseous drying medium from the housing 1. However, Tanaabe et al.

do not disclose a transport means including rollers arranged above and below the transport path and the number of the gas outlet devices and the arrangement of the nozzle apertures. Champlin teaches a concept of using a transport means including rollers 12, 13 arranged above and below the transport path for transporting the treated articles 11 along a predefined transport path. At least two pairs of first and second gas outlet devices are provided (see Fig. 1). At least two rows of nozzle apertures 35 are arranged side-by-side in the direction of the transport path (see Fig. 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of Tanabe et al. to include a transport means of Champlin in order to facilitate the transport of articles to be dried and to further modify the method and apparatus of Tanabe et al. to include at least two pairs of gas outlet devices and to arrange at least two rows of nozzle apertures side-by-side in the direction of the transport path as taught by Champlin in order to improve the drying efficiency.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (U. S. Pat. 5,044,938) in view of Champlin (U. S. Pat. 3,048,383) as applied to claim 11 above, and further in view of Leap (US 2003/0136019 A1).

The apparatus of Tanabe et al. as modified by Champlin as above includes all that is recited in claim 12 except for the nozzle apertures include elongated slits. Leap teaches a drying apparatus with nozzle apertures including elongated slits 30 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Tanabe et al. to include a nozzle with elongated slits as taught by Leap in order to obtain a predictable drying result.



10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (U. S. Pat. 5,044,938) in view of Champlin (U. S. Pat. 3,048,383) as applied to claim 22 above, and further in view of Hochstrasser et al. (U. S. Pat. 4,113,977).

The apparatus of Tanabe et al. as modified by Champlin as above includes all that is recited in claim 23 except for an extraction means, a pressure sensor means and a control means for controlling extraction means based on the pressure detected by the pressure sensor. Hochstrasser et al. teach an apparatus for drying article 54 comprising an evacuation duct 38, an extraction means 82, a pressure sensor 90 and a control means 94 same as claimed. The control means 94 controls the extraction means 84 in such a way that a pressure detected by the pressure sensor means 90 is maintained at a constant predefined value (see Fig. 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Tanabe et al. to include an extraction duct, an extraction means, a pressure sensor and a control means for controlling the extraction means based on the pressure detected by the pressure sensor as taught by Hochstrasser et al. in order to more efficiently control the drying.

11. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (U. S. Pat. 5,044,938) in view of Champlin (U. S. Pat. 3,048,383) as applied to claim 24 above, and further in view of Melgaard (U. S. Pat. 5,263,265).

The apparatus of Tanabe et al. as modified by Champlin as above includes all that is recited in claims 25-26 except for an intake duct for fresh gaseous drying medium and control means for controlling the heating means based on the detected gas temperature in the gas feed line. Melgaard teaches an apparatus for drying article 26 comprising an intake duct (at 30.2) for

fresh gaseous drying medium and a temperature sensor 32 and at least one gas heating means 22, 24. Control means 34.1 controls the gas heating means in such a way that the temperature detected by the temperature sensor 32 is regulated to a predefined value. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Tanabe et al. to include fresh gas intake duct and temperature control means for controlling the heating means based on gas temperature detected by the temperature sensor as taught by Melgaard in order to more efficiently control the drying.

#### ***Allowable Subject Matter***

12. Claims 29-30 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

13. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KENNETH RINEHART can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jiping Lu/  
Primary Examiner  
Art Unit 3743

J. L.